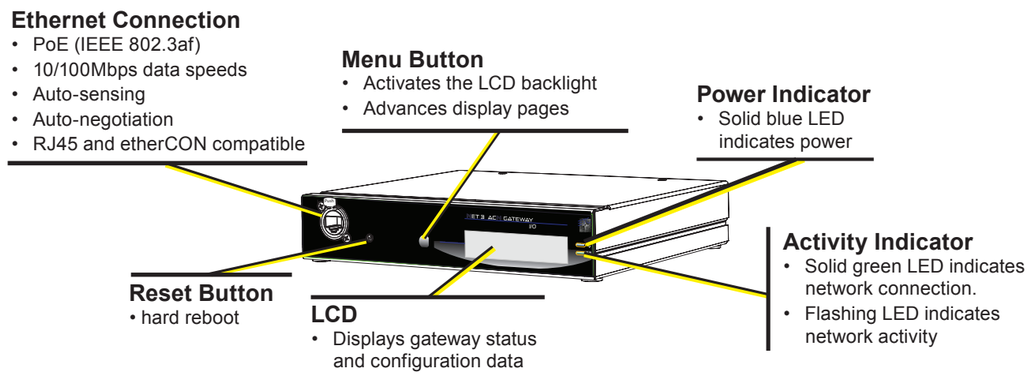
NET 3™

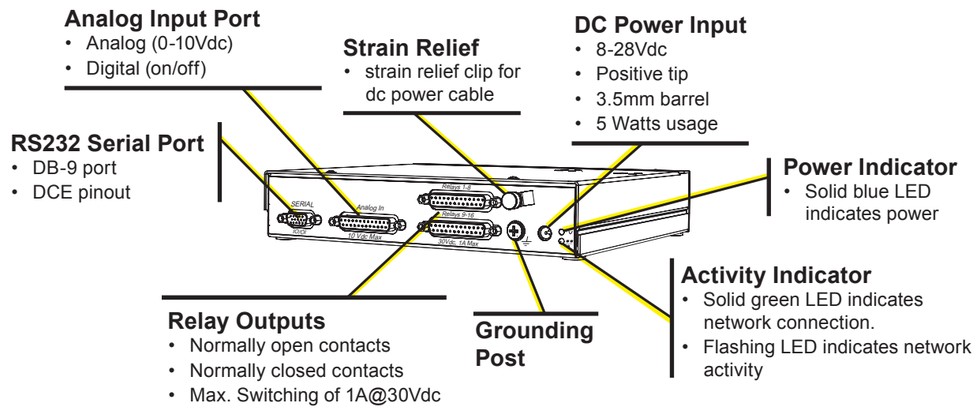
I/O Gateway Setup Guide

Overview

This Setup Guide will guide you through the setup of the Net3 I/O Gateway including hardware, electrical and data connections. Software configuration of your gateway is covered separately and relates specifically to the software versions that may be running in the gateways.

- For **Net3** configuration, please refer to the Gateway Configuration Editor (GCE) Online Help System.
- For use on **ETCNet2** systems, use the ETCNet2 Network Configuration Editor (NCE) User Manual which includes information about the Net3 gateways running in ETCNet2 mode.





Corporate Headquarters ■ 3031 Pleasant View Road, P.O. Box 620979, Middleton, Wisconsin 53562-0979 USA ■ Tel +608 831 4116 ■ Fax +608 836 1736
London, UK ■ Unit 26-28, Victoria Industrial Estate, Victoria Road, London W3 6UU, UK ■ Tel +44 (0)20 8896 1000 ■ Fax +44 (0)20 8896 2000
Rome, IT ■ Via Pieve Torina, 48, 00156 Rome, Italy ■ Tel +39 (06) 32 111 683 ■ Fax +44 (0) 20 8752 8486
Holzkirchen, DE ■ Ohmstrasse 3, 83607 Holzkirchen, Germany ■ Tel +49 (80 24) 47 00-0 ■ Fax +49 (80 24) 47 00-3 00
Hong Kong ■ Rm 1801, 18/F, Tower 1 Phase 1, Enterprise Square, 9 Sheung Yuet Road, Kowloon Bay, Kowloon, Hong Kong ■ Tel +852 2799 1220 ■ Fax +852 2799 9325
Service: (Americas) service@etcconnect.com ■ (UK) service@etceurope.com ■ (DE) techserv-hoki@etcconnect.com ■ (Asia) service@etcasia.com
Web: www.etcconnect.com

4263M2200 ■ Revision D ■ 2012-05

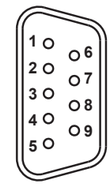
RS-232 Serial Port

At the most basic level, the serial port on the I/O Gateway acts as a converter between standard RS-232 serial strings of information and a Net3/ACN equivalent that is sent over Ethernet. This allows a control console, or other ACN device, to have a remote serial port and to extend the normal distance limitations of serial communications. The I/O Gateway does not act on this serial communication, but acts as a bridge between RS-232 and Ethernet.

The serial property options available are (default settings are in **bold**):

- **9600**, 14400, 19200, 28800, 38400, 57600 and 115200 Baud
- 7 or **8** data bits
- **None**, Even or Odd for Parity
- **1** or 2 Stop Bits
- **None**, Xon/Xoff, Hardware are the Flow Control options

RS-232 Pinout



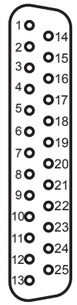
Pin	Connection
1	unused
2	RS232-TX
3	RS232-RX
4	unused
5	ISO-ground
6	RS232-DSR
7	RS232-CTS
8	RS232-RTS
9	unused

NOTE: **A straight through cable is required to connect to a computer (use DTE pinout). Connecting to many remote serial products requires a cross-over cable (use DCE pinout).**

Analog Input Port

The analog input port is used to accept external contact closures and/or analog 0 - 10Vdc input (depending on software configuration) and send them as Net3/ACN Ethernet messages to a networked control console or other ACN device. This port requires an external 10Vdc power supply to operate. In On/Off mode (contact closure), the gateway supplies +5Vdc to the circuit through each input pin.

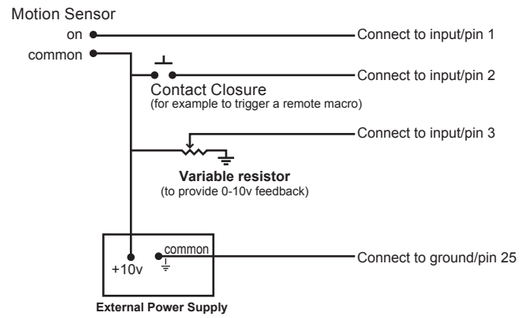
Analog Input DB25 Connector Pinout



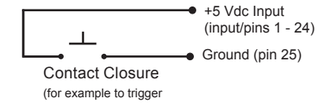
Pin	Connection	Pin	Connection
1	Analog In #01	14	Analog In #14
2	Analog In #02	15	Analog In #15
3	Analog In #03	16	Analog In #16
4	Analog In #04	17	Analog In #17
5	Analog In #05	18	Analog In #18
6	Analog In #06	19	Analog In #19
7	Analog In #07	20	Analog In #20
8	Analog In #08	21	Analog In #21
9	Analog In #09	22	Analog In #22
10	Analog In #10	23	Analog In #23
11	Analog In #11	24	Analog In #24
12	Analog In #12	25	Analog In-Ground
13	Analog In #13		

Example circuit for Analog inputs

Choose your input connections based on your own system



Example for Digital Input (on/off)



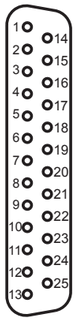
Relay Outputs

When choosing your connections (normally open versus normally closed) to the relay outputs, be sure to consider the default or powered off state of the relay and how your connected device will react when the I/O Gateway is powered off or reset.

For example, if your device will activate with a closed circuit, don't choose a normally closed connection and keep it open using a command from a controlling Ethernet based device. This choice could result in your device activating at an unanticipated time during a software update or when the gateway is not powered. You should choose the normally open connection instead as it doesn't activate unless it is specifically directed to do so.

Relay Outputs 1-8 DB25 Connector Pinout

Pin	Connection	Pin	Connection
1	Normally Closed #1	14	Common #5
2	Common #1	15	Normally Open #5
3	Normally Open #1	16	Normally Closed #6
4	Normally Closed #2	17	Common #6
5	Common #2	18	Normally Open #6
6	Normally Open #2	19	Normally Closed #7
7	Normally Closed #3	20	Common #7
8	Common #3	21	Normally Open #7
9	Normally Open #3	22	Normally Closed #8
10	Normally Closed #4	23	Common #8
11	Common #4	24	Normally Open #8
12	Normally Open #4	25	unused
13	Normally Closed #5		



Relay Outputs 9-16 DB25 Connector Pinout

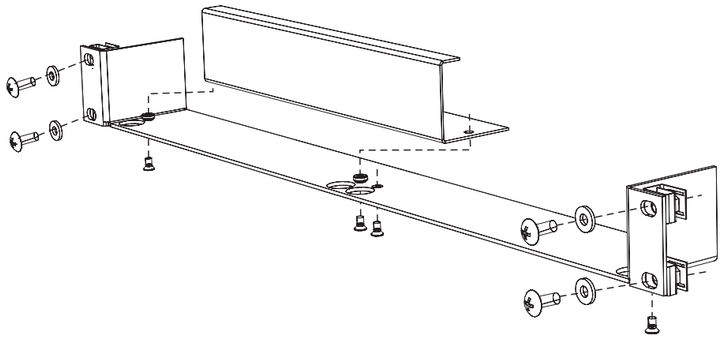
Pin	Connection	Pin	Connection
1	Normally Closed #9	14	Common #13
2	Common #9	15	Normally Open #13
3	Normally Open #9	16	Normally Closed #14
4	Normally Closed 10	17	Common #14
5	Common #10	18	Normally Open #14
6	Normally Open #10	19	Normally Closed #15
7	Normally Closed #11	20	Common #15
8	Common #11	21	Normally Open #15
9	Normally Open #11	22	Normally Closed #16
10	Normally Closed #12	23	Common #16
11	Common #12	24	Normally Open #16
12	Normally Open #12	25	unused
13	Normally Closed #13		

NOTE: **Each relay supports a maximum of 1.0A at 30Vdc.**

Optional Accessories

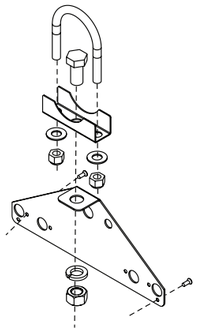
Rack Mount Kit (4260K1001)

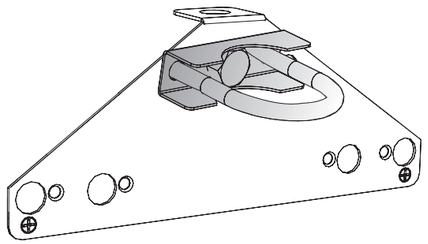
The Net3 Gateway Rack Mount kit is capable of holding up to two Net3 gateways for mounting into a standard 19” rack enclosure. If you only need to mount one unit, a blanking plate is provided with the kit. This blanking plate can be installed on either side of the rack mount bracket.

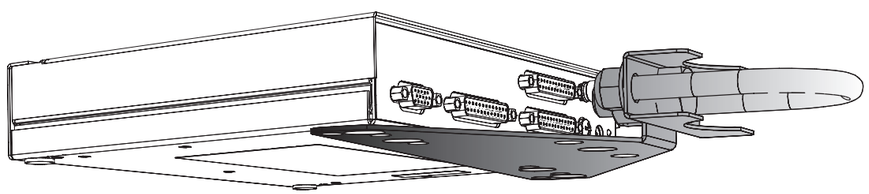


Hanging Hardware Kit (4260K1005)

The Net3 Hanging Hardware kit allows pipe mounting of a Net3 Gateway in a variety of orientations. You can vary the way the U-bolt (or c-clamp) attaches to the bracket and the way the bracket mounts to the gateway. The bracket attaches to any edge on the bottom of your gateway.







Power Up Using DC Power

When using an external power supply, the gateway must be connected to a network before being powered.

Menu Structure

The Net3 I/O Gateway has a one button interface. Pressing the **[Menu]** button repeatedly cycles through the menu, displaying related data. On certain menu items you are prompted to press and hold the **[Menu]** button for a period of 5 seconds to change a state or setting.

FOH_Box1	• displays either the gateway name or the “IP Address”.
Analog Input 1 0.00 Volts - 00%	• displays **“Analog Input”** if the gateway is configured for Analog “0 to 10 Volts” input mode or displays **“Contact Input”** if the gateway is configured for “On / Off” input mode. Each of the 24 inputs are displayed on their own menu page. • when in “0 to 10 Volts” input mode, 0.00 Volts displays the voltage measured at the contact or when in “On / Off” input mode the display will show “Open” or “Closed”.
IP Address 10.101.50.102	• displays the current IP address of the gateway.
Subnet Mask 255.255.0.0	• displays the current Subnet Mask of the gateway.
Gateway IP 10.101.50.102	• displays the current IP address for a network router (or the gateway’s own IP address).
Gateway Version v1.0.0.9.0.64	• displays the version number of the software currently running on this device.
Hold button 5 sec to Download Software	• software is retrieved from the current TFTP update server .
Hold button 5 sec to Factory Defaults	• Restoring defaults will cause the gateway to reset all settings to the factory defaults.

Help from ETC Technical Services

If you experience difficulty during setup or installation of the Net3 gateway, additional information is available from www.etcconnect.com, or by contacting ETC Technical Services at your local office listed on the bottom of page 1.